

must be durable, legible, and must be readily visible, as specified in § 178.3(a). An infectious substance packaging that successfully passes the tests conforming to the UN standard must be marked as follows:

- (1) The United Nations symbol as illustrated in paragraph (e) of this section.
- (2) The code designating the type of packaging and material of construction according to the identification codes for packagings specified in § 178.502.
- (3) The text “CLASS 6.2”.
- (4) The last two digits of the year of manufacture of the packaging.
- (5) The country authorizing the allocation of the mark. The letters “USA” indicate the packaging is manufactured and marked in the United States in compliance with the provisions of this subchapter.
- (6) The name and address or symbol of the manufacturer or the approval agency certifying compliance with subparts L and M of this part. Symbols, if used, must be registered with the Associate Administrator for Hazardous Materials Safety.
- (7) For packagings meeting the requirements of § 178.609(i)(3), the letter “U” must be inserted immediately following the marking designating the type of packaging and material required in paragraph (f)(2) of this section.

[Amdt. 178–97, 55 FR 52717, Dec. 21, 1990, as amended at 56 FR 66284, Dec. 20, 1991; Amdt. 178–102, 59 FR 28493, June 2, 1994; Amdt. 178–106, 59 FR 67520, 67521, Dec. 29, 1994; Amdt. 178–107, 60 FR 26806, May 18, 1995; 62 FR 51561, Oct. 1, 1997; 66 FR 45386, Aug. 28, 2001; 67 FR 61016, Sept. 27, 2002; 67 FR 53143, Aug. 14, 2002; 68 FR 75757, Dec. 31, 2003; 75 FR 5395, Feb 2, 2010; 75 FR 60339, Sept. 30, 2010]

§ 178.504 Standards for steel drums.

- (a) The following are identification codes for steel drums:
 - (1) 1A1 for a non-removable head steel drum; and
 - (2) 1A2 for a removable head steel drum.
- (b) Construction requirements for steel drums are as follows:
 - (1) Body and heads must be constructed of steel sheet of suitable type and adequate thickness in relation to the capacity and intended use of the

drum. Minimum thickness and marking requirements in §§ 173.28(b)(4) and 178.503(a)(9) of this subchapter apply to drums intended for reuse.

(2) Body seams must be welded on drums designed to contain more than 40 L (11 gallons) of liquids. Body seams must be mechanically seamed or welded on drums intended to contain only solids or 40 L (11 gallons) or less of liquids.

(3) Chimes must be mechanically seamed or welded. Separate reinforcing rings may be applied.

(4) The body of a drum of a capacity greater than 60 L (16 gallons) may have at least two expanded rolling hoops or two separate rolling hoops. If there are separate rolling hoops, they must be fitted tightly on the body and so secured that they cannot shift. Rolling hoops may not be spot-welded.

(5) Openings for filling, emptying and venting in the bodies or heads of non-removable head (1A1) drums may not exceed 7.0 cm (3 inches) in diameter. Drums with larger openings are considered to be of the removable head type (1A2). Closures for openings in the bodies and heads of drums must be so designed and applied that they will remain secure and leakproof under normal conditions of transport. Closure flanges may be mechanically seamed or welded in place. Gaskets or other sealing elements must be used with closures unless the closure is inherently leakproof.

(6) Closure devices for removable head drums must be so designed and applied that they will remain secure and drums will remain leakproof under normal conditions of transport. Gaskets or other sealing elements must be used with all removable heads.

(7) If materials used for body, heads, closures, and fittings are not in themselves compatible with the contents to be transported, suitable internal protective coatings or treatments must be applied. These coatings or treatments must retain their protective properties under normal conditions of transport.

(8) Maximum capacity of drum: 450 L (119 gallons).

(9) Maximum net mass: 400 kg (882 pounds).

[Amdt. 178-97, 55 FR 52717, Dec. 21, 1990, as amended at 56 FR 66284, Dec. 20, 1991; Amdt. 178-110, 60 FR 49111, Sept. 21, 1995]

§ 178.505 Standards for aluminum drums.

(a) The following are the identification codes for aluminum drums:

(1) 1B1 for a non-removable head aluminum drum; and

(2) 1B2 for a removable head aluminum drum.

(b) Construction requirements for aluminum drums are as follows:

(1) Body and heads must be constructed of aluminum at least 99 percent pure or an aluminum base alloy. Material must be of suitable type and adequate thickness in relation to the capacity and the intended use of the drum. Minimum thickness and marking requirements in §§173.28(b)(4) and 178.503(a)(9) of this subchapter apply to drums intended for reuse.

(2) All seams must be welded. Chime seams, if any, must be reinforced by the application of separate reinforcing rings.

(3) The body of a drum of a capacity greater than 60 L (16 gallons) may have at least two expanded rolling hoops or two separate rolling hoops. If there are separate rolling hoops, the hoops must be fitted tightly on the body and so secured that they cannot shift. Rolling hoops may not be spot-welded.

(4) Openings for filling, emptying, or venting in the bodies or heads of non-removable head (1B1) drums may not exceed 7.0 cm (3 inches) in diameter. Drums with larger openings are considered to be of the removable head type (1B2). Closures for openings in the bodies and heads of drums must be so designed and applied that they will remain secure and leakproof under normal conditions of transport. Closure flanges may be welded in place so that the weld provides a leakproof seam. Gaskets or other sealing elements must be used with closures unless the closure is inherently leakproof.

(5) Closure devices for removable head drums must be so designed and applied that they remain secure and drums remain leakproof under normal conditions of transport. Gaskets or

other sealing elements must be used with all removable heads.

(6) Maximum capacity of drum: 450 L (119 gallons).

(7) Maximum net mass: 400 kg (882 pounds).

[Amdt. 178-97, 55 FR 52717, Dec. 21, 1990, as amended at 56 FR 66284, Dec. 20, 1991; Amdt. 178-102, 59 FR 28494, June 2, 1994]

§ 178.506 Standards for metal drums other than steel or aluminum.

(a) The following are the identification codes for metal drums other than steel or aluminum:

(1) 1N1 for a non-removable head metal drum; and

(2) 1N2 for a removable head metal drum.

(b) Construction requirements for metal drums other than steel or aluminum are as follows:

(1) Body and heads must be constructed of metal (other than steel or aluminum) of suitable type and adequate thickness in relation to the capacity and the intended use of the drum. Minimum thickness and marking requirements in §§173.28(b)(4) and 178.503(a)(9) of this subchapter apply to drums intended for reuse.

(2) All seams must be welded. Chime seams, if any, must be reinforced by the application of separate reinforcing rings.

(3) The body of a drum of a capacity greater than 60 L (16 gallons) may have at least two expanded rolling hoops or two separate rolling hoops. If there are separate rolling hoops, the hoops must be fitted tightly on the body and so secured that they cannot shift. Rolling hoops may not be spot-welded.

(4) Openings for filling, emptying, or venting in the bodies or heads of non-removable head (1N1) drums may not exceed 7.0 cm (3 inches) in diameter. Drums with larger openings are considered to be of the removable head type (1N2). Closures for openings in the bodies and heads of drums must be so designed and applied that they will remain secure and leakproof under normal conditions of transport. Closure flanges may be welded in place so that the weld provides a leakproof seam. Gaskets or other sealing elements must be used with closures unless the closure is inherently leakproof.